IN THE CLAIMS:

1. (previously presented) In a MOSFET transistor with a reactive metal gate electrode, a method for protecting the gate electrode from an underlying gate insulator, the method comprising:

forming a gate insulator overlying a channel region;

forming a first metal barrier overlying the gate insulator, having a thickness of less than 5 nanometers (nm);

forming a second metal gate electrode overlying the first metal barrier with a work function exclusively responsive to the second metal.

- 2. (previously presented) The method of claim 1 wherein forming a second metal gate electrode includes forming a second metal gate electrode having a thickness of greater than about 10 nm.
- 3. (original) The method of claim 2 wherein forming a first metal barrier includes forming a first metal barrier having a thickness of greater than 1.5 nm, and less than 5 nm.
- 4. (original) The method of claim 1 wherein forming a second metal gate electrode includes forming a second metal gate electrode from a material selected from the group of elementary metals including p+ poly, n+ poly, Ta, W, Re, RuO2, Pt, Ti, Hf, Zr, Cu, V, Ir, Ni, Mn, Co, NbO, Pd, Mo, TaSiN, and Nb, and binary metals including WN, TaN, and TiN.
- 5. (original) The method of claim 1 wherein forming a gate insulator overlying a channel region includes forming a gate insulator from a material selected from the group including SiO2, high-k dielectrics

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such as HfO2, ZrO2, Al2O3, La2O3, HfAlOx, and HfAlON, and binary, ternary, and nitrided metal oxides.

- The method of claim 1 wherein forming a 6. (original) first metal barrier includes forming the first metal barrier from a material selected from the group including binary metals such as TaN, TiN, and WN.
- 7. (original) The method of claim 6 wherein forming a second metal gate electrode includes forming a second metal gate electrode having a high work function.
- 8. The method of claim 7 wherein forming a (original) second metal gate electrode with a high work function includes the second metal being selected from the group including elemental metals such as Ir, Pt. Cu, Re, Ni, Mn, Co, RuO2, p+ poly, Pd, Mo, and TaSiN, and binary metals such as TaN, WN, and TiN.
- The method of claim 6 wherein forming a 9. (original) second metal gate electrode includes forming a second metal gate electrode having a low work function.
- 10. The method of claim 9 wherein forming a (original) second metal gate electrode with a low work function includes selecting the second metal from the group of materials including elementary metals such as Al, Nb, Hf, Zr, V, Ir, n+ poly, W, Ti, Ta, and NbO, and binary metals such as TaN, TiN, and WN.

- 11. (original) The method of claim 1 wherein establishing a gate work function exclusively responsive to the second metal includes establishing a threshold voltage (Vth).
- 12. (original) The method of claim 1 wherein forming a first barrier metal overlying the gate insulator includes the first metal barrier preventing the migration of oxygen from the gate insulator to the second metal gate electrode.
- 13. (original) The method of claim 1 wherein forming a first barrier metal overlying the gate insulator includes the first metal barrier preventing the migration of B into the gate insulator from a p+ poly gate electrode.

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27. (previously presented) In a MOSFET transistor with a reactive metal gate electrode, a method for protecting the gate electrode from an underlying gate insulator, the method comprising:

forming a gate insulator overlying a channel region;

forming a first metal barrier overlying the gate insulator;

forming a second metal gate electrode overlying the first metal barrier, selected from the group of materials including elemental metals such as Ir, Pt, Re, Ni, Mn, Co, RuO2, p+ poly, Pd, Mo, and TaSiN, and binary metals such as TaN, WN, and TiN; and,

wherein the gate electrode has a high work function exclusively responsive to the second metal.

28. (previously presented) In a MOSFET transistor with a reactive metal gate electrode, a method for protecting the gate electrode from an underlying gate insulator, the method comprising:

forming a gate insulator overlying a channel region;
forming a first metal barrier overlying the gate insulator;
forming a second metal gate electrode overlying the first metal
barrier, selecting the second metal from the group of materials including
elementary metals such as Al, Nb, Hf, Zr, V, Ir, n+ poly, W, Ti, Ta, and NbO,

wherein the gate electrode has a low work function exclusively responsive to the second metal.

and binary metals such as TaN, TiN, and WN; and,